

ATTACHMENT A

SUMMARY OF OPERATING, MONITORING AND REPORTING REQUIREMENTS

<u>CHARACTERISTIC</u>	<u>LIMITATION</u>	<u>MINIMUM MONITORING FREQUENCY</u>	<u>MINIMUM REPORTING FREQUENCY</u>
Injection Pressure*	765 psig	continuous	monthly
Annulus Pressure	100 psig minimum	continuous	monthly
Annulus Pressure Differential	at least 100 psig over injection pressure	continuous	monthly
Injection Rate** (Average for both wells #1-12 and #2-12)	166 gpm	continuous	monthly
Injection Rate (Maximum instantaneous)	270 gpm	continuous	monthly
Sight Glass Level		continuous	monthly
Cumulative Volume		daily	monthly
Annulus Fluid Loss		monthly	monthly
Chemical Composition of Injected Fluids***		monthly	monthly
Physical Characteristics of Injected Fluids***		monthly	monthly
pH of Injected Fluids -----		continuous	monthly

*The maximum injection pressure was determined by site specific testing of the injection zone. The limitation on injection pressure will serve to prevent injection-formation fracturing.

** Average injection rate shall be reported using the calculation formulas and form on page A-2 of 7 of this permit

*** As specified in the approved Waste Analysis Plan, found in the permit file for this permit. Monitoring frequency could be monthly, quarterly or annually.

Calculation of average injection rate for the EDS commercial hazardous Class I permits in Wayne Co., Michigan.

CURRENT REPORTING YEAR _____
CURRENT REPORTING MONTH _____

Date of the first injection at either well at the Citrin Road Facility _____ (month and year)

Whole number of months of injection _____

365.25 days per year ÷ 12 months per year = 30.4375 days per month
30.4375 days per month × 1440 minutes per day = 43,830 minutes per month

CURRENT MONTH (all volumes in gallons)

MI-163-1W-C007 — Well #1-12	MI-163-1W-C008 — Well #2-12
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	Injected Waste	Injected Non- Waste	Total injected	Injected Waste	Injected Non- Waste	Total injected	Lifetime Combined Injected Vol.
Current Month							
Since facility first injected							

(_____ lifetime number of months of injection × 43,830 minutes/month) = _____ minutes of injection

Lifetime combined injected vol. _____ ÷ _____ minutes of injection = _____ g.p.m. [average inj. rate]

HAZARDOUS SUBSTANCES LIMITATIONS AND REPORTING

<u>RCRA CODE</u>	<u>NAME</u>	<u>LIMITATION</u>	<u>MINIMUM MONITORING FREQUENCY</u>	<u>MINIMUM REPORTING FREQUENCY</u>
F039, P004	Aldrin	200 mg/l	monthly	monthly
U021	Benzidine	200 mg/l	monthly	monthly
P016,K017	sym-Dichloromethyl ether	160 mg/l	monthly	monthly
F020,F021, F022,F026, F027,F028, F032,F039, K043,K099	Hexachlorodibenzo- p-dioxins	6 mg/l	monthly	monthly
K174,K178	Hexachlorodibenzo- p-dioxins, all	6 mg/l	monthly	monthly
F039,P082	N- Nitrosodimethylamine	700 mg/l	monthly	monthly
F039,K174, K178	1,2,3,4,6,7,8,9- Octachlorodibenzofuran	6 mg/l	monthly	monthly
F039,K174, K178	1,2,3,4,6,7,8,9- Octachlorodibenzo- p-dioxin	6 mg/l	monthly	monthly
F020,F021, F022,F026, F027,F028, F032,F039, K043	Tetrachlorodibenzo- p-dioxins (TCDD)	30 mg/l	monthly	monthly
K174,K178	Tetrachlorodibenzo- p-dioxins (TCDD)	30 mg/l	monthly	monthly
P110	Tetraethyl lead	100 mg/l	monthly	monthly

PROPOSED WASTE "SOURCE" INFORMATION

The information shown in Subparts A through F of this Attachment must be submitted by the permittee initially for each proposed waste "source", pursuant to Part II(B)(2) of this permit. The permittee may incorporate the information into a form of its own, provided that all information is included, and that the same form is used for all proposed "sources". The permittee, by submitting appropriate knowledge of waste, shall specify that the waste from each "source" is either hazardous or non-hazardous as defined at 40 C.F.R. §§ 261.30-33. Appropriate knowledge of waste may consist of any or all of the following three categories: (1) knowledge of the waste generation process, (2) detailed record-keeping, or (3) waste analysis data. The permittee must receive written authorization from the USEPA prior to injecting waste from this "source". Authorization shall consist of a final minor-modified permit, which shall list this "source" as an approved "source" in Part III(E) of this permit. Upon receiving the minor-modified permit, the permittee shall be authorized to inject this waste, subject to the conditions of this permit and the permittee's approved waste analysis plan. The USEPA will make every reasonable effort to expedite the administrative processing of minor permit modifications.

For proposed hazardous or non-hazardous waste "sources", reporting of quarterly sampling and analysis shall be required, as specified in Part II(D)(2) of this permit. Certain waste "sources" may require more stringent sampling and analysis.

A. Permittee Information

- 1) Owner/Operator Name
- 2) Owner/Operator Address (Street, City, State, Zip Code)
- 3) Facility Contact Name and Telephone Number
- 4) Well Location (Township, Range, Section, Quarter Section, footage
NSL, EWL)
- 5) USEPA UIC Permit Number
- 6) State Permit Number
- 7) Well Name

B. Proposed Generator ("Source") Information

- 1) "Source" Identification Number
- 2) Generator Name
- 3) Generator Address (Street, City, State, Zip Code)
- 4) Generator Contact Name and Telephone number
- 5) USEPA Identification Numbers (if applicable)

For Oilfield Waste "Sources" Only:

- 1) "Source" Identification number
- 2) MDEQ Oilfield Name
- 3) Location (Township, Range, and Section)
- 4) Geologic Formation

The "Source" identification number is a unique number assigned to the waste generator at the location specified above.

C. Waste Transporter Information

- 1) Transporter name
- 2) Transporter Address (Street, City, State, Zip Code)
- 3) Transporter Contact Name
- 4) Transporter Contact phone number
- 5) USEPA Identification numbers (if applicable)

D. Waste "Source" Characterization

- 1) Sample analysis results, which include:
 - a) Corrosivity
 - b) Reactivity (as applicable to sample matrix)
 - c) Ignitability
 - d) Toxicity
 - e) Specific Conductance
 - f) Specific Gravity
 - g) Temperature
 - h) All other constituents which are indicated by the generator as constituting a major portion of the waste stream (i.e., greater than 0.01 percent by mass).

The test for toxicity shall follow the Toxicity Characteristic Leaching Procedure and should include all appropriate constituents (which are listed at 40 C.F.R. 261.24). The permittee may rely on the generator's knowledge of waste consistent with 40 C.F.R. 262.11 and all appropriate knowledge of waste to reduce the number of constituents tested.

- 2) Any appropriate analytical results necessary to identify waste constituents which may indicate a listed hazardous waste as defined at 40 C.F.R. §§ 261.31, 261.32, 261.33, or 261.34.
- 3) Sampling and Analysis Description

The following information must be specified for each sampling event:

- a) If appropriate, a letter from the permittee which describes

- b) how the waste was determined to be nonhazardous
- b) Sample collector's name, title, and employer
- c) Sample collection method and preservation technique
- d) Sample collection point

The following information must be specified for each parameter:

- e) Analytical method for parameter detection/quantification
- f) Analytical method accuracy
- g) Upper and lower analytical method quantitation limits

E. Quality Assurance and Quality Control (QA/QC)

A description of the QA/QC Protocol followed:

- a) Equipment cleaning blanks
- b) Trip blanks
- c) Sample duplicates
- d) Chain of custody
- e) Equipment calibration
- f) Data reduction and validation

These requirements are specified in the QA/QC portion of the permittee's waste analysis plan.

F. Historical background of facility

Historical background of the facility, including a detailed description of the process involved in generating the waste, how it is collected and stored. Indicate whether the proposed waste "source" is a one-time "source". The description should identify any periodic changes in facility operations which alter the composition of the waste stream. The permittee should keep in mind that the purpose of requesting this information is to assure that the monitoring frequency for this "source" accounts for changes in the nature of the waste due to changes in facility operations. If a change in operations causes a change in the waste stream, the permittee must require monitoring which is representative of ongoing operations. Monitoring data supplied by the waste generator must be representative of the waste being generated for the entire period between sampling events.

G. Periodic Monitoring of Approved "Sources"

Oilfield Brine Wastes

All approved oilfield brine wastes shall be monitored at a minimum for the following parameters: Sodium, Calcium, Magnesium, Barium, Total Iron, Chloride, Sulfate, Carbonate, Bicarbonate, Sulfide, Total Dissolved Solids, pH, Resistivity (ohm-meters @ 75°F), and Specific Gravity.

Fingerprint Analysis

All wastes that require fingerprint analysis as specified in Part III(E) of this permit shall, at a minimum, be subject to tests for the following:

pH,	Flashpoint,
Total Settleable Solids,	Conductivity,
Temperature,	Specific Gravity,
Color,	Odor,

and any other analyses deemed appropriate for characterizing the injected waste.

Periodic Analysis

All non-oilfield brine waste sources will be analyzed as specified in Part III(E) of this permit.